

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and lists of claims in the application:

Claims 1-6 (Cancelled)

Claim 7 (Currently Amended) A method for differentiating progenitor cells into cholinergic neurons in a patient [~~in need of same~~] comprising administering [~~to said patient a pharmaceutical composition comprising an amount of~~] BMP-9 in a pharmaceutically acceptable vehicle in an amount sufficient to induce differentiation of progenitor cells into cholinergic neurons.

Claim 8 (Cancelled)

Claim 9 (Currently Amended) A method for treating a patient with degenerating cholinergic neurons [~~in a patient in need of same~~] comprising administering [~~to said patient a pharmaceutical composition comprising an amount of~~] BMP-9 in a pharmaceutically acceptable vehicle in an amount sufficient to induce differentiation of progenitor cells into cholinergic neurons.

Claim 10 (Cancelled)

Claim 11 (Currently Amended) A method for upregulating the expression of [~~genes for~~] choline acetyltransferase genes in a patient [~~in need of same~~] comprising administering [~~a pharmaceutical composition comprising an amount of a~~] BMP-9 protein in a pharmaceutically acceptable vehicle in an amount sufficient to upregulate the [~~genes for~~] choline acetyltransferase genes in said patient.

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Claim 12 (Currently Amended) A method for upregulating vesicular acetylcholine transporter in a patient [in need of same] comprising administering [a pharmaceutical composition comprising an amount of a] BMP-9 protein in a pharmaceutically acceptable vehicle in an amount sufficient to upregulate vesicular acetylcholine transporter in said patient.

Claim 13 (Cancelled)

Claim 14 (Currently Amended) A method for treating a patient with degenerating motor neurons [in a patient in need of same] comprising administering [to said patient an amount of] a BMP-9 composition [in an amount] sufficient to prevent degeneration of motor neurons in said patient.

Claims 15-16 (Cancelled)

Claim 17 (Currently Amended) A method for treating a patient with malfunctioning cholinergic neurons [in a patient in need of same] comprising administering [to said patient a pharmaceutical composition comprising an amount of] BMP-9 in a pharmaceutically acceptable vehicle in an amount sufficient to induce differentiation of progenitor cells into cholinergic neurons in said patient.

Claim 18 (New) A method for preventing brain function and/or memory loss in a patient comprising administering BMP-9 in a pharmaceutically acceptable vehicle in an amount sufficient to induce differentiation of progenitor cells into cholinergic neurons in said patient.

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